

REMARKS

Claims 1-3, 5-9 and 25-29 are rejected under 35 U.S.C. §103(a) as being unpatentable over JP-11102542 to Matsuoka et al. in view of U.S. Patent No. 6,627,688 to Takeda and U.S. Patent Application Publication No. 2002/0085143 to Tanaka. Applicants respectfully traverse the rejection.

The present claims recite a photo-curable adhesive sheet that contains a homopolymer or copolymer having a photopolymerizable functional group. The photo-curable adhesive sheet of the present application has photopolymerizable properties by UV radiation or the like and adequate flexibility (i.e., a glass transition temperature of not more than 20°C). Therefore, the photo-curable adhesive sheet can be depressed on the fine uneven shape of an optical information recording substrate in order to precisely follow the uneven surface and adhere to it by polymerization. The resulting optical information recording substrate has a signal surface (uneven surface) to which the adhesive sheet precisely adheres, and is free from adverse effects on the signal surface caused by the adhesion. Accordingly, the resultant optical information recording medium scarcely brings about occurrences of errors when the information (signals) is read out.

Matsuoka et al. teach a laminate consisting of a release sheet and a second release sheet which are bonded to each other with an adhesive sheet and used for preparing a disc. However, Matsuoka et al. is completely silent with respect to materials of the adhesive sheet and how to cure the adhesive. Thus, Matsuoka et al. fails to teach or suggest a photo-curable adhesive.

Takeda discloses an adhesive comprised of a copolymer prepared from various (meth)acrylates. Therefore, the resultant copolymer has no (meth)acryloyl group. That is, the resultant copolymer lacks a photopolymerizable functional group. As such, the adhesive

disclosed in Takeda is not photo-curable. Further, Takeda discloses the coating and polymerization of monomers to bring about a copolymer. *See*, column 7, lines 23-30. Similarly, the copolymer also has no photopolymerizable functional group. Thus, the adhesive of Takeda uses a copolymer having no reactivity.

Turning to Tanaka et al., Tanaka et al. also disclose an adhesive of a copolymer prepared from various (meth)acrylates. The resultant copolymer has no (meth)acryloyl group. As such, the resultant copolymer lacks a photopolymerizable functional group, and is not photo-curable. Thus, the adhesive of Tanaka et al. uses a copolymer having no reactivity.

The Examiner points to the composition of Formulation 1 in the present specification, and notes that the composition contains 90% alkyl acrylate including 2-ethylhexyl acrylate and methyl methacrylate and 10% 2-hydroxyethyl methacrylate. However, according to the present invention, the polymer prepared from the composition of Formulation 1, a polymer having an OH group (derived from 2-hydroxyethyl methacrylate), is further reacted with Calens MOT (2-isocyanatoethyl methacrylate) in order to provide a copolymer having a photopolymerizable functional group. *See*, page 68, lines 6-10.

Given the above, Applicants respectfully submit that the present invention is unobvious from Matsuoka et al., Takeda and Tanaka et al. Specifically, the photo-curable adhesive sheet comprising a photo-curable composition which comprises a homopolymer or copolymer derived from alkyl acrylates and/or alkyl methacrylates and having a photopolymerizable functional group and weight-average molecular weight of not less than 5,000 and which has a glass transition temperature of not more than 20°C is not taught or suggested by Matsuoka et al., Takeda and Tanaka et al. Accordingly, withdrawal of the rejection is requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

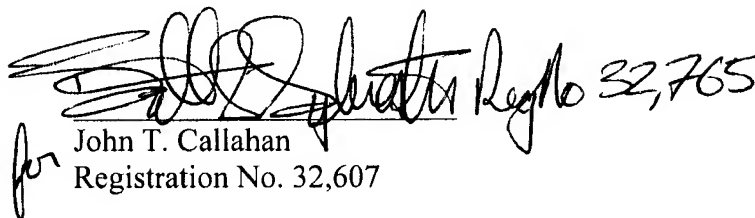
SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

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for John T. Callahan
Registration No. 32,607